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## **"Marine Aviation for the Coming Century"**

**Address of  
The Under Secretary of Defense for Acquisition and Technology  
Dr. Paul G. Kaminski**

**to the  
Marine Corps Aviation Association  
Fort Myer, VA**

**October 9, 1996**

Thank you for the kind introduction. It's a great pleasure to be with you this evening. Tonight, I would like to share some of my views on modernization of Marine aviation forces for the coming century.

Before I do so, I think it is important to reflect back on the words of the D-Day veteran who said "You can manufacture weapons, and you can purchase ammunition, but you can't buy valor and you can't pull heroes off an assembly line."

We are enormously blessed in this country with extremely talented and dedicated people. As I travel around and visit various installations, it is apparent that our principal advantage is our people. I'm impressed with the hardware we have fielded, but invariably I'm always even more impressed with the young men and women who operate the hardware.

It is important that we provide them affordable systems that are second to none on the battlefield – or in the skies above it.

### **DEFENSE BUDGET OUTLOOK**

Let me set the stage for this talk by sharing with you my views on where the defense budget is headed.

As I see it, the pressure on defense spending will continue. The real value of defense spending has declined in each of the last eleven years since 1986 – through the last three years of the Reagan Administration, through Desert Storm and the Bush Administration and now through the first term of the Clinton Administration.

We plan to stabilize defense spending at the proposed 1997 level of around \$244 billion--\$254 billion if you include defense-related work in the Department of Energy budget – and then sustain small levels of real growth at about one percent per year. Some would say that this is too optimistic for at least three reasons.

First, we are facing a reduced threat. Think of it – the United States outspends the six next biggest military powers. Combined. And five of those six are our allies.

Second, non-discretionary spending – entitlements and the interest on the national debt – are taking up a growing share of the federal budget. Put more starkly, these mandatory expenditures accounted for only 29.6 percent of the federal budget in 1963. In 2003, they will account for 72 percent of the budget. The net interest on national debt is now just over \$240 billion, almost equal to defense spending. This is our motivation to balance the budget.

And third, polling data indicates that the American people, by a two-to-one margin, want further cuts in defense spending. When asked what items in the budget should, or should not, be cut, 72 percent of Americans responded that Social security should not be cut and 64 percent responded that Medicare should not be cut. At the same time, 64 percent said the defense budget should be cut further.

Frankly, as I said in another forum last year, I am not encouraged that recent Congressional adds to the defense budget are much cause for long term optimism. Nothing has changed my opinion over the past year. The budget authority set by the Congressional Budget Resolution contains near term Congressional adds, but provides less funding than the President's Budget – to the tune of nearly \$10 billion less per year – after the year 2000.

These are the federal budget trends we are working with, and while we are planning for small levels of real growth – we are mindful of the need for maintaining a hedging posture and are executing a defense modernization and sustainment strategy that is tuned to the larger economic and federal budget trends at work today.

## **QUADRENNIAL DEFENSE REVIEW**

Reduced defense budgets and emerging post-Cold war dangers make the task of protecting America's national security different and in many ways more complex than it was during the Cold War. Clearly, our challenge will be to maintain the legacy of technological supremacy--both in our equipment and in the forces that will be using that equipment--within an affordable budget profile. The key question is: how will we sustain and modernize the forces we need?

The answer to this question will be the central focus of the second subject I want to touch on this evening. It is the QDR, or Quadrennial Defense Review, coming up next year. The QDR will take another look at the Department's Strategy, Force Structure, Modernization, Infrastructure, and Readiness to meet its future mission requirements.

We are now forming several working groups, composed of military and civilians throughout the Department, to study each of these elements. This will build on the major DoD mission requirements review conducted four years ago, the Bottom-Up Review.

I think we're beginning to see a fundamental new planning trend emerge here. In response to the pace of change in threats, warfighting concepts, and technological opportunities, it appears we need to conduct a comprehensive review of defense mission requirements review every four years at the beginning of each administration.

Without trying to second guess the outcome of the 1997 QDR, I think it is worthwhile to share with you some of my views on what we can reasonably expect to do. On the input side, we can expect a more robust set of threat scenarios to be considered—beyond the two MRCs outlined in the Defense Guidance.

From an investments tradeoff standpoint, expect investments in the mix of platforms, weapons and C4ISR—Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance—to be traded.

I am not yet confident that we have the tools to fully evaluate the contribution of investments in C4ISR capabilities. This is one of the reasons why the Department has set up the C4ISR Decision Support Center. By the 2001 QDR, I expect this center to play a major role in providing the Department with a good set of analytical tools to make these trades. I look at this year's DAWMS—the Deep Attack Weapons Mix Study—and related as developing the tools and discipline and serving as a “launching pad” for the 1997 QDR.

When the study is complete, I would not expect to see the Department move away from the two MRC requirement or major across-the-board reductions in force structure. But I do see a major shift coming in our tooth-to-tail ratio and the way we sustain our forces. More cuts in the infrastructure “tail” are necessary. It is my sense that the large support structures set up to handle finance, accounting, information technology, housing, logistics, maintenance and training are ripe targets for outsourcing savings and quality improvements.

## V-22

On the programs side, I believe the QDR will re-affirm that the V-22 with its speed, range and payload has the potential to enormously increase the combat capability of Marine Corps and Special Operations Command maneuver forces. It promises to be a revolutionary new capability and that it will allow our forces to cover large portions of the battle area rapidly.

Shortly after being appointed to my current job in February 1995, I approved continuation of Engineering and Manufacturing Development and the procurement of long-lead items for the first low-rate initial production. A defense Acquisition Board is scheduled in February 1997 to consider approval of the first low rate initial production segment of the program.

As the program matures, I expect to consider multi-year procurement alternatives for full rate production. The multi-year procurement decision will hinge on a number of factors, including our perception of the maximum affordable production rate, whether the design and production processes are stable, whether we have a firm understanding of the program's cost structure, and whether the discounted MYP savings are significant enough to justify the loss of budget flexibility and exposure to increased termination liability.

### **H-1 UPGRADE**

Another program of interest is the H-1 Upgrade Program. It encompasses both the AH-1W attack helicopter and the UH-1N utility helicopter. The current platforms are reaching the end of their service life and have run out of room for growth—power, cooling, weight and space. The need for growth margins will take on increasing significance as we move forward on plans to improve the capabilities of our platforms with C4ISR augmentation from off-board systems. The planned upgrades include a new common 4-bladed rotor system with composite blades, an upgraded transmission, a new tail boom, and an improved tail rotor drive system.

Earlier this week, we held Milestone II review to look at readiness to enter Engineering and Manufacturing Development. Although I have not yet signed an acquisition decision memorandum, I believe the AH-1W is ready to go forward and I am prepared to go forward with an option to preserve the UH-1N until we resolve budget issues in the DRB. Those decisions have not yet been made.

### **AV-8B**

We are also upgrading and extending the service life of the AV-8B fleet by remanufacturing older day-attack-only aircraft to the latest night-attack configuration. In addition to a radar upgrade, these aircraft are receiving more powerful engines. I view the AV-8B remanufacture program as providing an important transition hedge to the Joint Strike Fighter.

### **JOINT STRIKE FIGHTER**

Some elements of the Congress made a run this year on knocking the Marine Short Take Off and Vertical Landing—or STOVL—variant of the Joint Strike Fighter out

of the program as a cost savings measure. In June, I testified before the Military R&D Subcommittee of the House Committee on National Security that this would have a significant impact on the JSF program and would not be the best solution to making our overall TACAIR modernization program more affordable.

Aside from the fact that the STOVL strike fighter variant provides Naval expeditionary combined arms forces with extraordinary basing flexibility, STOVL needs to be considered more broadly than thinking about it as a Marine Corps issue. Terminating STOVL would also eliminate participation of the Royal Navy and other potential international partners, whose primary interest is in the STOVL version.

Although not easily quantified, there may be some room for a STOVL variant in the Air Force or Navy inventory. Going to shorter fields doesn't hurt us for some of the Air Force's Air Expeditionary Force operations in the world of the future, and this may also open up opportunities for alternatives to current carrier size.

A little less than two years ago, about the time we were preparing to send the FY96 budget request to the Congress, it was not at all certain that the Joint Strike Fighter Tri-Service "Family of Aircraft" concept was viable. I think that uncertainty was reflected in the radically different positions taken by the four defense oversight committees on the FY96 authorization and spending acts.

Over the past fifteen months, my sense is that the program has really gelled. I believe the JSF commonality concept is not only viable, but also the most affordable approach to meeting the Services' needs.

What's changed? Simply stated--we've put our requirements act together. We now have all the services using a much more rigorous requirements generation process, thinking joint, and incorporating modeling and simulation to support cost-performance trades. We're treating cost as an independent variable in which every requirement must earn its way on to the airplane.

As a result, JSF cost commonality is projected to be in the 80 percent range. While each of the Services will accept some compromise in performance, it appears as though this will be small with insignificant impact on their operational concepts and no significant impact on their warfighting capability.

US versions of the JSF will be highly leveraged by off-board sensors and C4ISR systems. By piping information into the cockpit from Joint STARS, AWACS, unmanned aerial vehicles like Predator, and overhead satellites, the aircraft can be built with a much less expensive on-board sensor suite.

I believe the Department has an opportunity to replace the Air Force's F-16s, the Navy's F/A-18s and Marine AV-8Bs with a tri-service family of aircraft ranging in unit flyaway cost from \$25 to 35 million—and saving about \$16 billion in development costs and more than \$60 billion in life cycle costs compared to three separate Service unique programs.

Let me underscore the last point. Our attention is not focused solely on the initial acquisition cost. We are concerned with overall life cycle cost. This emphasis is driven by the fact that 60-70% of most weapon system's costs are incurred subsequent to initial deployment of the system. To the extent the Department maintains systems longer, life cycle cost becomes a more important consideration.

The message here is that "back end" sustainment costs are receiving more "up front" design attention. The JSF program is committed to this approach. There is a sizable technology maturation effort underway on the JSF program. Each technology effort must "buy it's way onto the program" in terms of reducing life cycle cost and program risk.

To support these investment decisions, there is a fairly well developed life cycle cost model that includes estimates for operational and support elements like unit level consumables, training, expendables, depot maintenance and mission personnel.

As I stated earlier I am emphasizing within the Department and on programs like JSF is the need to reduce the logistics "footprint" of our weapon systems. There is a tremendous leveraging effect associated with reducing the amount of support equipment and consumables we must take with us when we go to war. This is especially important in the early stages of a conflict when airlift resources are scarce and before a sealift bridge can be closed.

The JSF program is viable and on track. It deserved and received the full support of the Congress as the defense authorization and appropriation conference committees took up the FY97 budget request.

## SUMMARY

In closing, my thoughts on modernizing Marine Corps' aviation forces for the coming century can be summarized as follows:

- We are planning for small levels of real growth—less than one percent—in the defense topline, and this will in turn put great pressure on us to do more with less;



- We are about to launch a Quadrennial Defense Review to take a comprehensive look at the Department's Strategy, Force Structure, Modernization, Infrastructure, and Readiness to meet future mission requirements—I do not expect large reductions in force structure to emerge from this review, instead I see the need for more cuts in the infrastructure "tail" and outsourcing of non-core functions; and
- The Department is committed to modernizing Marine aviation forces in general and to proceeding with the Joint Strike Fighter in particular—the JSF concept is the right solution for affordably modernizing our fixed-wing strike platforms, and it is breaking new ground on increasing systems commonality; reducing life cycle cost; and shrinking the logistics footprint of deployed forces.

There is no single "instant fix" that the DOD can rely on to meet our national security needs. Omar Bradley once said that "Drawing a plan is 10 percent of the job; seeing that plan through is the other 90 percent." So too with aviation force modernization, we need to see our plans through—over the long haul.

I look forward to going forth with you to leave a legacy, a foundation, for those that will follow -- for U.S. Marine aviation forces in the coming century.

Thank you all.